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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,787	06/27/2003	Takashi Honda	239689US3X	6368

22850 7590 09/21/2005

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EXAMINER

RENNER, CRAIG A

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/606,787

Applicant(s)

HONDA ET AL.

Examiner

Craig A. Renner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>16 August 2005</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 18 July 2005. These drawings are accepted.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following is suggested:  
  
--MAGNETIC HEAD APPARATUS WITH LOAD BEAM FLOATING STRUCTURE--.

3. The disclosure is objected to because of the following informality:

In line 1 of claim 23, "A magnetic head supporting mechanism apparatus according to claim 22" should be changed to --A magnetic head supporting mechanism according to claim 22-- in order to more clearly refer back to that set forth in line 1 of claim 22. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-7, 15-21, 29 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In line 15 of claim 1, "said load generating portion" is indefinite because it lacks clear and/or positive antecedent basis.

b. In lines 5 and 16 of claim 15, and lines 3 and 4 of claim 21, it is indefinite as to whether each instance of "said head arm" refers to that set forth in line 2 of independent claim 15, or that set forth in line 3 of independent claim 15.

c. Claims 2-7, 16-20, 29 and 31 inherit the indefiniteness associated with their respective base claims and stand rejected as well.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 7-8, 14-15, 21-22, and 28-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuwajima et al. (US 6,751,064).

With respect to claims 1, 7, and 29, Kuwajima et al. (US 6,751,064) teaches a magnetic head apparatus comprising a load beam (2) to which a floating type slider (1) is attached; a head arm (8, for instance) that is supported in such a way as to be pivotable in a radial direction of a recording medium (12) and supports the load beam (as shown in FIGS. 4-5, for instance); an elastically deformable portion (4) provided on the load beam, so that a floating structure that allows the load beam to swing is formed about the elastically deformable portion (as shown in FIG. 1, for instance); and a load generating member (includes 11a and/or 11b, for instance) for applying a load onto a predetermined position of the load beam (as shown in FIGS. 4-5, for instance); wherein, the predetermined position of the load beam is adapted to coincide with a center of mass (P) of the load beam (as shown in FIGS. 4-5, for instance) and is provided in proximity with a position at which the load beam is supported by the head arm (as shown in FIGS. 4-5, for instance); and a pressing load of the slider against the recording medium is set by a pressure generated at the load generating portion (line 66 in column 8 through line 25 in column 9, for instance) [as per claim 1]; wherein the head arm has a strengthen plate (26, for instance) that is attached to the head arm perpendicularly in such a way that it would not interfere with the recording medium [as per claim 7]; and wherein the magnetic head apparatus is a component of a magnetic recording apparatus (23) [as per claim 29].

With respect to claims 8, 14, and 30, Kuwajima et al. (US 6,751,064) teaches a magnetic head apparatus comprising a load beam (2) to which a floating type slider (1) is attached; a head arm (8, for instance) that is supported in such a way as to be

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pivotable in a radial direction of a recording medium (12) and supports the load beam (as shown in FIGS. 4-5, for instance); an elastically deformable portion (4) provided on the load beam, so that a floating structure that allows the load beam to swing is formed about the elastically deformable portion (as shown in FIG. 1, for instance); a projecting portion (includes 11a and/or 11b, for instance) for generating a load disposed in the vicinity of the elastically deformable portion of the load beam; and a pressure receiving surface (includes Pa and/or Pb, for instance) provided on the load beam for receiving a pressure from the projecting portion; wherein a position of the projecting portion is adapted to coincide with a center of mass (P) of the load beam (as shown in FIGS. 4-5, for instance) and is provided in proximity with a position at which the load beam is supported by the head arm (as shown in FIGS. 4-5, for instance); and a pressing load of the slider against the recording medium is set by a pressure applied to the pressure receiving surface (line 66 in column 8 through line 25 in column 9, for instance) [as per claim 8]; wherein the head arm has a strengthen plate (26, for instance) that is attached to the head arm perpendicularly in such a way that it would not interfere with the recording medium [as per claim 14]; and wherein the magnetic head apparatus is a component of a magnetic recording apparatus (23) [as per claim 30].

With respect to claims 15, 21, and 31, Kuwajima et al. (US 6,751,064) teaches a magnetic head apparatus comprising a base plate (11, for instance); a head arm (8, for instance) that is supported in such a way as to be pivotable in a radial direction of a recording medium (12); a load beam (2) that extends from the base plate and is supported by the head arm through the base plate (as shown in FIGS. 4-5, for

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instance); a floating type slider (1) attached to the load beam; an elastically deformable portion (4) provided between the base plate and the load beam (as shown in FIG. 1, for instance), so that a floating structure that allows the load beam to swing is formed about the elastically deformable portion (as shown in FIG. 1, for instance); a projecting portion (includes 11a and/or 11b, for instance) for generating a load disposed in the vicinity of the elastically deformable portion of the load beam; a pressure receiving surface (includes Pa and/or Pb, for instance) provided on the load beam; wherein a position of the projecting portion is adapted to coincide with a center of mass (P) of the load beam (as shown in FIGS. 4-5, for instance) and is provided in proximity with a position at which the load beam is supported by the head arm (as shown in FIGS. 4-5, for instance); a pressing load is applied to a surface of the recording medium via the floating type slider (line 66 in column 8 through line 25 in column 9, for instance); and a pressing load of the slider against the recording medium is set by a pressure applied to the pressure receiving surface (line 66 in column 8 through line 25 in column 9, for instance) [as per claim 15]; wherein the head arm has a strengthen plate (26, for instance) that is attached to the head arm perpendicularly in such a way that it would not interfere with the recording medium [as per claim 21]; and wherein the magnetic head apparatus is a component of a magnetic recording apparatus (23) [as per claim 31].

With respect to claims 22, 28, and 32, Kuwajima et al. (US 6,751,064) teaches a magnetic head supporting mechanism comprising a magnetic head apparatus (9) including a base plate (5) and a load beam (2) extending from the base plate; a head

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arm (includes 11, for instance) that is supported in such a way as to be pivotable in a radial direction of a recording medium (12) and is attached (albeit indirectly) to the base plate; a floating type slider (1) attached to the load beam; an elastically deformable portion (4) provided between the base plate and the load beam (as shown in FIG. 5, for instance) so that a floating structure that allows the load beam to swing is formed about the elastically deformable portion (as shown in FIG. 1, for instance); a projecting portion (includes 11a and/or 11b, for instance) for generating a load disposed in the vicinity of the elastically deformable portion of the load beam, the projecting portion for generating a load being provided on the head arm (as shown in FIG. 1, for instance) and being adapted to apply a pressure to the load beam (as shown in FIG. 1, for instance); wherein a position of the projecting portion is adapted to coincide with a center of mass (P) of the load beam (as shown in FIGS. 4-5, for instance) and is provided in proximity with a position at which the load beam is supported by the head arm (as shown in FIGS. 4-5, for instance); a pressing load is applied to the recording medium via the floating type slider (line 66 in column 8 through line 25 in column 9, for instance); and the pressing load to the recording medium is set by an amount of rotation of the load beam caused by the pressure applied by the projecting portion (line 66 in column 8 through line 25 in column 9, for instance) [as per claim 22]; wherein the head arm has a strengthen plate (10, for instance) that is attached to the head arm perpendicularly in such a way that it would not interfere with the recording medium [as per claim 28]; and wherein the magnetic head apparatus is a component of a magnetic recording apparatus (23) [as per claim 32].



***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-6, 11-13, 18-20, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwajima et al. (US 6,751,064).

Kuwajima et al. (US 6,751,064) teaches the magnetic head apparatus as detailed in paragraph 7, supra. Kuwajima et al. (US 6,751,064), however, remains silent as to the load beam being made of an “electrically conductive resin”, as per claims 4-5, 11-12, 18-19, and 25-26, or an “electrically conductive coating... formed on... resin” as per claims 4, 6, 11, 13, 18, 20, 25, and 27.

Official notice is taken of the fact that each of an electrically conductive resin and an electrically conductive coating formed on resin is a notoriously old and well known load beam material in the same field of endeavor for the purpose of inhibiting electrostatic discharge. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the load beam of Kuwajima et al. (US 6,751,064) be made of an electrically conductive resin, or an electrically conductive coating formed on resin. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the load beam of Kuwajima et al. (US 6,751,064) be made of an electrically conductive resin, or

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an electrically conductive coating formed on resin since each is a notoriously old and well known load beam material in the same field of endeavor for the purpose of inhibiting electrostatic discharge, and since selecting a known material on the basis of its suitability for the intended use is within the level of ordinary skill in the art, *In re Leshin*, 125 USPQ 416 (CCPA 1960).

10. Claims 2-3, 9-10, 16-17, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwajima et al. (US 6,751,064) in view of Sato (JP 09-082052).

Kuwajima et al. (US 6,751,064) teaches the magnetic head apparatus as detailed in paragraph 7, *supra*. Kuwajima et al. (US 6,751,064), however, remains silent as to the magnetic head apparatus further comprising a “dead weight made of a vibration damping member” as per claims 2, 9, 16, and 23; and wherein the dead weight is made of “resin” as per claims 3, 10, 17, and 24.

Sato (JP 09-082052) teaches a magnetic head apparatus further comprising a dead weight (7, for instance) made of a vibration damping member (lines 1-3 of the PROBLEM, for instance) in the same field of endeavor for the purpose of preventing head damage by easing head shocks. Official notice is taken of the fact that resin is a notoriously old and well known dead weight material in the art. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the magnetic head apparatus of Kuwajima et al. (US 6,751,064) further comprise a dead weight made of a vibration damping member as taught by Sato (JP 09-

082052), and to have had the dead weight of Kuwajima et al. (US 6,751,064) in view of Sato (JP 09-082052) be made of resin. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the magnetic head apparatus of Kuwajima et al. (US 6,751,064) further comprise a dead weight made of a vibration damping member as taught by Sato (JP 09-082052) since such prevents head damage by easing head shocks.

One of ordinary skill in the art would have been motivated to have had the dead weight of Kuwajima et al. (US 6,751,064) in view of Sato (JP 09-082052) be made of resin since such is a notoriously old and well known dead weight material in the art, and since selecting a known material on the basis of its suitability for the intended use is within the level of ordinary skill in the art. See *In re Leshin*, supra.

### ***Response to Arguments***

11. Applicant's arguments filed 18 July 2005 have been fully considered but they are not persuasive.

The applicant argues that "Kuwajima et al. '064 fails to teach or suggest that the support arm 2 is separated into a load beam and a head arm as claimed in Claims 1, 8, 15 or 22 as now amended. Accordingly, it is submitted that Kuwajima et al. '064 fails to teach that a load is applied to the load beam at a predetermined position near a position at which the load beam is supported by the head arm." This argument, however, is not found to be persuasive as Kuwajima et al. '064 teaches a load beam (2) that is separate from a head arm (8, for instance) and a load is applied to the load beam at a

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predetermined position (Pa or Pb) near a position at which the load beam is supported by the head arm (as shown in FIGS. 4-5, for instance).

### ***Conclusion***


12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Tuesday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Craig A. Renner  
Primary Examiner  
Art Unit 2652

CAR